

Community Factor Analysis of Demand Dental Health Services in the Era New Normal

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Track Record Article

Accepted: 10 May 2023
Revised: 25 September 2023
Published: 30 September 2023

How to cite :
Syaiful, D. A., Paskarini, I., Martiana, T., Purwanti, A. D., Ramadhan, D. W., & Silehu, E. S. (2023). Community Factor Analysis of Demand Dental Health Services in the Era New Normal. Contagion : Scientific Periodical of Public Health and Coastal Health, 5(3), 1080–1092.

Abstract

Dental health problems cannot be ignored because they will impact health. Moreover, many people often experience toothache, but only a small percentage access dental and oral health services in the New Normal era. This is based on the results of preliminary research on 112 respondents. As many as 69.60% of respondents had dental and oral health problems, but only 31.30% accessed dental and oral health services during the adaptation period to new habits. This encouraged researchers to research Community Factor Analysis of Dental Health Service Reports in the new normal era. This research aims to determine the need and demand for dental and oral health services located in Surabaya in the era of Adaptation to New Habits. This research method uses a quantitative descriptive research design. The research was conducted in Surabaya in January 2019. The sampling technique was non-random sampling. The population in the study was 3.095.026 residents of Surabaya City, so the sample for this study was 394 people. The data collection technique was carried out by filling out a questionnaire. The data obtained was then analyzed using univariate analysis using descriptive data tabulation. The research results show that the older the age, the higher the demand for dental health services (42.9%). In addition, women have higher demands than men (30.0%). Finally, negative perceptions of health greatly influence demands for dental care (63.6%). Based on the research results, respondents' use of dental and oral health services is still low, and their needs and demands still need to be met. It is recommended that oral health be promoted through social media and that this research be used to engage oral health services.

Keywords: Need Dental, New Normal, Oral Health Services

INTRODUCTION

Dental and oral health must be considered the same as body health because dental and oral health is an integral part of overall body health (Sherlyta et al., 2017). According to some people, dental and oral health is not a top priority, even though dental and oral diseases can have a serious impact on general health because the teeth and mouth are places for germs and bacteria to enter so that they are likely to interfere with the health of other organs of the body (Puspitasari et al., 2018).

Dental and oral health problems can cause a person to experience limited tooth function (difficulty chewing, eating, gets stuck, bad breath, disturbed digestion), physical disability, pain every time you chew, psychological discomfort, and psychological disability (Ramadhan et al., 2016). Based on the 2018 Basic Health Research, the prevalence of people with dental and oral problems in the last 12 months in Indonesia is 57.6%. Meanwhile, according to East Java Province, 54.22% of the population aged ≥ 3 years experienced dental and oral problems. In

Surabaya, 49.05% of the population aged ≥ 3 years experience dental and oral problems (Kemenkes RI, 2019).

On April 13 2020 Indonesia declared Covid-19 a national non-natural disaster. As of December 29 2020, in Indonesia the number of Covid-19 cases was 727.000 people. 597.000 people were declared cured and 21.703 died (Indonesia Ministry of Health, 2021). The five provinces with the highest cases of Covid-19 are Jakarta, East Java, West Java, Central Java and South Sulawesi. East Java until December 29 2020, is still in 2nd position for the number of cases*Covid-19*. The highest was 82.321 people, 70.467 people were declared cured, and 5.701 died (Infocovid19.Jatimprov.Go.Id, 2020). The city of Surabaya is the city in East Java that ranks first in the most cases of Covid-19. Namely there are 18.073 confirmed Covid-19, 142 are currently being treated, 16,685 have been confirmed recovered, and 1246 have been confirmed dead (*Surabaya Tanggap COVID-19*, 2020). One of the strongest transmissions of Covid-19 is caused by droplets or droplets of a person's saliva.

In July 2020, the Indonesian Dentists Association issued a Guidebook for Dentists in the New Normal Era or Adaptation to New Habits. Indonesian dentists began to practice again. Indonesian Dentists Association allows dentists throughout Indonesia to start practising again with various conditions that must be complied with due to the many requests and complaints from the public, clinics, hospitals and health service institutions so that dentists can immediately return to practice because people have difficulty getting treatment. Dental and oral health services are aimed at the community, families and individuals, both sick and healthy (Motevasel et al., 2022).

People will use health service facilities if they feel they need health services. Utilization of health services is related to community needs and demands (Alafaleg et al., 2023). Demand is the desire for a particular product, supported by the ability to pay (Egha et al., 2021). Factors influencing individual needs in utilizing health services are individual characteristics, psychological factors, environmental factors, and service provider factors (Supriyanto et al., 2010).

Factors influencing demand for health services are physiological needs, personal assessment of health status, tariffs, people's income, health insurance and health insurance, demographic variables and age and gender (Hastuti, 2017). Other factors include the availability of doctors and health service facilities (Nanda, 2021).

Indonesian people's dental and oral health awareness still needs to improve, and people tend only to seek treatment when complaints arise. On average, people come to the dentist in conditions requiring complex treatment. As a result, the costs incurred are much higher. This

shows that the ability and desire to obtain services or effective demand for dental care in Indonesia still needs to improve. So, the level of dental and oral health in the community still needs to be in a good category and affects various activities in daily life. If this continues, the dream of creating a healthy society will be hindered.

Moreover, public health is related to various aspects of life, including achieving state goals. Because people who are sick will have difficulty carrying out various activities, every health service should understand the various needs of the community and not give up on providing various health education, especially dental and oral, so that people become more aware and sensitive to their health conditions so that they have the desire to check themselves regularly at health institutions, especially dental in this era. new normal (Nanda, 2021).

The above statement encourages researchers to analyze community factors regarding the demand for dental health services in the new normal era. This research aims to identify individual and psychological factors influencing public health behaviour and attitudes in Surabaya. The location in Surabaya was chosen because it is known that the people of Surabaya have a fairly high percentage of people who experience toothache. However, awareness of getting their teeth checked at health services is quite low, so the pain they experience gets worse, and the healing process takes longer and requires unlimited funds. Another aim of this research is to analyze the demand for dental and oral health services in the community of Surabaya in the era of Adaptation to New Habits.

METHODS

This research uses a descriptive quantitative approach in Surabaya in January 2019. The population of this research is people who live in Surabaya, both those who have utilized dental and oral health services and those who have not, with a total of 3.095.026 people spread across 31 sub-districts. The sample in this study were people aged 17-35 years, according to the age of most respondents at the time of the preliminary survey in Surabaya. The sample has the following criteria:

1. The people of Surabaya City are at least 17 -35 years old
2. Willing to be a respondent in this study
3. Able to access and run Google form

The sampling method used is Random Sampling. The technique used is Incidental Sampling, where this sampling is based on coincidence. That is, anyone who coincidentally/accidentally meets the researcher can be used as a sample if it is deemed that the

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person met by chance is suitable as a data source. The basis for determining the sample size is data on the number of people residing in the Surabaya City area. Then, this data is used to estimate the population size to determine the sample size. Data from the Surabaya City Population and Civil Registry Office found that the number of people in the Surabaya City area in January 2019 was around 3.095.026 people in 31 sub-districts. However, the population aged 17-35 years is unknown, so the number of samples in this study was 394 respondents.

The instrument used in this study was a questionnaire sheet distributed online to the people of Surabaya City with the criteria of being more than or equal to 17-35 years old and originally domiciled in Surabaya City. The instrument contains individual respondent factors, psychological factors, and felt *need*s.

The research instrument was made based on several references, such as the 2018 Riskesdas questionnaire, dentist guidelines for the new normal era or adaptation to new habits, previous research (Kumar Mallineni et al., 2021; Magennis et al., 2022; Monro, 2022; Van Der Linden et al., 2023), and research related to services dental and oral health during the Covid-19 pandemic (Aden et al., 2022; Schwendicke et al., 2020).

The variables in this study are community factors that influence the sample's behaviour in visiting dental health services, where the independent variables are age, gender, education level, occupation and income. Meanwhile, the dependent variable is dental health services in the new normal era.

The data collection technique was carried out by distributing questionnaires to respondents, and then the data obtained was analyzed using descriptive univariate analysis in the form of distribution and frequency using data tabulation tables to determine the research results with the Statistical Program for Social Science (SPSS) software version 26.

RESULTS

Community factors that will be cross-tabulated in this study are individual and psychological in the community of Surabaya.

The respondent's age is the length of life of the respondent, calculated from the date of birth to the date the research was carried out. Table 1 shows the results of Respondents' Age Cross Tabulation with demand for dental and oral health services.

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Table 1. Cross tabulation of respondent's age with demand for Dental and Oral Health Services in the new habit adaptation era in the City of Surabaya in 2021

Age	Demand Dental and Oral Health Services in the Last 6 Months				Total	
	Yes		No			
	n	%	n	%	N	%
17-25 Years	97	27,6	255	72,4	352	100,0
26-35 Years	18	42,9	24	57,1	42	100,0
Total	115	29,2	279	70,8	394	100,0

Table 1 shows that the highest dental and oral health services were in the age group of 26-35 years or early adults (42.9%). This shows that the older the age, the more demand for dental and oral health services.

Gender is categorized into two, namely male and female. Table 2 shows the results of the cross-tabulation of the sex of the respondents with demand for dental and oral health services.

Table 2. Cross tabulation of Respondents' Gender with demand for Dental and oral health services in the new habit adaptation era in the city of Surabaya in 2021

Gender	Demand Dental and Oral Health Services in the Last 6 Months				Total	
	Yes		No			
	n	%	n	%	N	%
Man	35	27,6	92	72,4	127	100,0
Woman	80	30,0	187	70,0	267	100,0
Total	115	29,5	279	70,8	394	100,0

Table 2 shows that more respondents who used dental and oral health services in the City of Surabaya in the new habit adaptation era were female (30.0%) than male (27.6%). Hence, the demand for dental and oral health services is mostly female.

The level of education referred to in this research is the last formal education completed by the respondent with the category no school, elementary school, junior high school, high school or high school, or college. Table 3 shows the cross-tabulation results of the respondent's education level with demand for dental and oral health services.

Table 3. Cross tabulation of Respondents' Education Level Demand Dental and Oral Health Services in the New Habit Adaptation Era in the City of Surabaya in 2021

Level of education	Demand Dental and Oral Health Services in the Last 6 Months				Total	
	Yes		No			
	n	%	n	%	N	%
No School	3	20,0	12	80,0	15	100,0
Elementary school	2	66,7	1	33,3	3	100,0
Junior high school	12	42,9	16	57,1	28	100,0
Senior high schools and vocational high schools	55	26,6	152	73,4	207	100,0
College	43	30,5	98	69,5	141	100,0
Total	115	29,2	279	70,8	394	100,0

Table 3 shows that of respondents who used dental and oral health services in the City of Surabaya during the new habit adaptation era, 66.7% of them had elementary school

education. At the same time, respondents who did not take advantage of dental and oral health services were respondents who did not attend school (80.0%).

Work is the main activity carried out by respondents who generate income and is still carried out when they become respondents to this study. Table 4 shows the cross-tabulation results of the respondents' work with demand for dental and oral health services.

Table 4. Cross Tabulation of Respondents' Occupations Demand Dental and Oral Health Services in the New Habit Adaptation Era in the City of Surabaya in 2021

Work	Demand Dental and Oral Health Services in the Last 6 Months				Total	
	Yes		No			
	n	%	n	%	N	%
Does not work	32	21,6	116	78,4	148	100,0
State Officer	2	66,7	1	33,3	3	100,0
Private Officer	45	37,8	74	62,2	119	100,0
Self-employed	9	27,3	24	72,7	33	100,0
Student	23	28,7	57	71,3	80	100,0
Freelance	3	33,3	6	66,7	9	100,0
Nurse	1	100,0	0	0,0	1	100,0
Businessman	0	0,0	1	100,0	1	100,0
Total	115	29,2	279	70,8	394	100,0

Table 4 shows that the number of respondents (100.0%) who used dental and oral health services in the City of Surabaya in the new habit adaptation era had a job as a nurse. Meanwhile, those who should have taken advantage of dental and oral health services in the new habit adaptation era (100.0%) had entrepreneurial jobs. The second place that did not utilize dental and oral health services were respondents who did not work (78.4%). It can be concluded that demand is higher for respondents who have jobs than those who do not.

Respondent's income is the result of money received by respondents from the work they do per month. Table 5 shows the cross-tabulation results of Respondents' income levels with demand for dental and oral health services.

Table 5. Cross Tabulation of Respondents' Income Levels with Demand Dental and Oral Health Services in the New Habit Adaptation Era in the City of Surabaya in 2021

Income	Demand Dental and Oral Health Services in the Last 6 Months				Total	
	Yes		No			
	n	%	n	%	N	%
Below the district or city minimum wage	43	36,1	76	63,9	119	100,0
District or city minimum wage	12	48,0	13	52,0	25	100,0
Above the district or City minimum wage	12	32,4	25	67,6	37	100,0
No income	48	22,5	165	77,5	213	100,0
Total	115	29,2	279	70,8	394	100,0

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Table 5 shows that respondents who used dental and oral health services in the City of Surabaya during the new habit adaptation era amounted to (48.0%), had income according to the district or city minimum wage. Meanwhile, those who did not take advantage of dental and oral health services in the new habit adaptation era (77.5%) did not have income. It can be concluded that those who do not have a demand percentage income or demand is smaller than respondents with income.

In this study, psychological factors will be tabulated with demand, namely perceptions of health-illness and perceptions of visits to the dentist during the Covid-19 pandemic. Perception of health-illness is a process by which individuals can organize and interpret the pain they feel. There are 4 categories: very positive, positive, negative, and very negative. Table 6 shows the cross-tabulation results of respondents' healthy-illness perceptions of demand for dental and oral health services.

Table 6. Cross Tabulation of Health-Illness Perceptions with Demand Dental and Oral Health Services in the New Habit Adaptation Era in the City of Surabaya in 2021

Perception of Health-Illness	Demand Dental and Oral Health Services in the Last 6 Months				Total	
	Yes		No			
	n	%	n	%	N	%
Very Positive	41	29,9	96	70,1	137	100,0
Positive	67	27,2	179	72,8	246	100,0
Negative	7	63,6	4	36,4	11	100,0
Total	115	29,2	279	70,8	394	100,0

Table 6 shows that respondents who used dental and oral health services in the City of Surabaya in the new habit adaptation era (63.6%) had a negative category of healthy-ill perception. Meanwhile, those who did not take advantage of dental and oral health services in the new habit adaptation era (72.8%) had positive health-ill perceptions.

DISCUSSION

Factors that influence the need for utilization of health services based on Donabedian's (1979) model are individual characteristic factors, psychological factors, environmental factors and service provider factors (Supriyanto & Ernawaty, 2010). Factors that influence the demand for health services Nanda (2021) are physiological needs, personal assessment of health status, tariffs, people's income, health insurance, demographic variables and age, gender, education, and health service facilities and availability of personnel health (Monro, 2022).

First, the age aspect. In terms of age, it is known that research respondents who utilize dental and oral health services are mostly in the 26-35-year age group, which is the early

adulthood age category or based on generational theory, they are included in the Generation Y or millennial generation category (Maravilla et al., 2023).

Generation Y and Generation Z have interacted with technology since they were born. Their insights regarding dental and oral health information are very broad because of the ease of internet access. The results also show that the older the respondent is, the higher the dental and oral health services demand. In line with the previous study results, a significant relationship exists between age and demand for health services (Sukma, 2019).

Age and disease increase the demand for health services (Tika & Widya, 2019). This is natural because the older a person is, his health will decline, so they tend to have more access to health services (Dihan et al., 2023). Likewise, the more diseases or health problems the community suffers, the more access to health services will increase (Setyawan, 2019).

The age factor also influences the demand towards preventive and curative health services. Older people's age will increase the demand for curative health services (Prasetyowati et al., 2020). The *demand for* dental and oral health services should be improved as early as possible, such as carrying out regular dental and oral health checks every 6 months and treating dental and oral problems before they worsen.

Second is the gender aspect. Regarding gender, it is known that most respondents who utilize dental and oral health services are female. Demand for women for health services is higher than men because women have a higher disease incidence than men. The female employment rate is classified as lower so that more time is spent on utilizing health services (Hastuti, 2017).

There is research that women's utilization of health services tends to be higher than men because women have a greater incidence and risk of disease than men (Mahendro et al., 2022). Women mostly perform oral and dental health practices than men, but they still have a greater risk of experiencing cavities due to hormonal fluctuations. Hormonal fluctuations in a woman's body, especially just before menstruation, can affect oral health, making the gums more sensitive (Mardianti et al., 2020).

The third, educational level. In terms of education level, data was obtained that respondents who used dental and oral health services had an elementary school education level. A person's level of education can influence a person's demand for health services (Zaini et al., 2022).

Higher education tends to increase awareness of the importance of health to improve health status Nanda (2021), this is by research, namely the demand for more educated respondents

than uneducated respondents. Previous research stated that there was no significant relationship between the variable level of education and the use of health services (R. Hutabarat, 2019).

The research results show that based on education level, the demand of respondents who have a higher elementary education level demand is for dental and oral health services compared to other levels of education such as junior high school, high school/vocational school, and tertiary institutions (R. Hutabarat, 2019). It can be concluded that the respondent's level of education does not affect the demand for dental and oral health services (Palaia et al., 2022).

Fourth, work. Regarding employment, research results showed that all respondents who utilized dental and oral health services worked as nurses. Occupation is one of the socioeconomic factors of consumers who play a role in influencing individuals to demand health services (Palaia et al., 2022). This can be proven by asking about the demand for dental and oral health services with higher employment than the demand for respondents who do not work.

Fifth income. In the income aspect, it is known that the majority of respondents who utilize dental and oral health services have an income according to the Surabaya city district or city minimum wage of Rp.4.300.000. Higher incomes tend to have purchasing power in a service product whose safety is guaranteed Egha et al., (2021). Request research results demand dental and oral health services are higher for respondents with income than those without income. Demand is higher for respondents with income according to the district or city minimum wage than those above the district or city minimum wage. High income can increase demand for health services, depending on the pain suffered and the individual's awareness to treat dental and oral health problems or to have regular dental and oral health checks. Low-quality health services and the tendency for individuals with high incomes to dislike going to health services because they are seen as spending much time can be demand factors for low health services (Nanda, 2021).

It does not stop here. Apart from the factors above, other factors influence dental health services in the new normal era, namely psychological factors. Psychological factors that affect demand for dental and oral health services, namely perceptions of health-illness and perceptions of visits to the dentist and mouth during the COVID-19 pandemic. Most respondents who use dental and oral health services negatively perceive health illness. Perceptions about disease, symptoms or possibility of disease, knowledge, attitudes, and beliefs about disease, health services and officers influence the utilization of public health services (Rahman P et al., 2016).

Research respondents who are generations Y and Z should have more dental and oral health knowledge because of easy access to the internet which can broaden their horizons. This shows that education is still needed regarding dental and oral health through social media that

this generation uses (Oliveira & Zanatta, 2020). Perceptions of health illness can affect the utilization of health services in the study of perceptions of health-illness in the negative category, it shows that respondents have difficulty understanding the concept of health illness in dental and oral health, which is higher than the positive and very positive categories. Respondents had difficulty understanding the concept of health and illness, but in terms of demand was much better than those who had a good category of health-illness perception or positive and very positive.

Therefore, awareness of the importance of bringing oneself to dental health services is vital because it will influence the quality of each individual's health. Knowing the various factors that can influence a community towards dental health services in the new normal era it can be used as a basis for carrying out follow-up actions for health workers to continue to socialize the importance of healthy living at all ages, levels of education, occupation, gender and income. Because no matter how busy individuals are, they have an obligation to maintain their health so that they can carry out various activities well.

CONCLUSIONS

Most of the respondents were aged 17-25 years and female. The respondent's last level of education was high school or vocational high school. Most respondents do not work or have or do not have income. Most respondents have positive or good perceptions of being healthy and sick, so they feel they need dental and oral health services. Likewise, with the perceptions of respondents regarding Visits to the Dentist During the COVID-19 pandemic, the majority of respondents were in a positive category, so they still felt the need for health services and still wanted to make visits to dental and oral health services during the Covid-19 pandemic. Dental and oral health service facilities in the city of Surabaya (practice dentists, dental and oral hospitals, dental and oral clinics, etc.) are expected to always strive to increase demand for dental and oral health services by promoting dental and oral health such as the importance of maintaining healthy teeth and mouth in the pandemic era, the importance of dental and oral examinations during a pandemic, etc. in media that are most in demand by generation Z or internet generation, for example, social media (Instagram, Twitter, Facebook, TikTok, etc.).

Suggestions for further research are to examine the analysis of the need and demand for dental and oral health services with the age range of respondents > 36 years and the period after May 2021 to update the policies implemented.

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